

# PATENT COOPERATION TREATY

From the  
INTERNATIONAL SEARCHING AUTHORITY

To:  
JEFFREY S. MELCHER  
MANELLI DENISON & SELTER, PLLC  
2000 M. STREET, N.W.  
7TH FLOOR  
WASHINGTON, DC 20036-3307

PCT

REC'D 17 OCT 2005  
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## WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

Applicant's or agent's file reference  62226-PCT-AM2		Date of mailing (day/month/year) <b>12 OCT 2005</b>
<b>FOR FURTHER ACTION</b> See paragraph 2 below		
International application No.  PCT/US05/00073	International filing date (day/month/year)  05 January 2005 (05.01.2005)	Priority date (day/month/year)  05 January 2004 (05.01.2004)
International Patent Classification (IPC) or both national classification and IPC  IPC(7): G01N 31/00 and US Cl.: 702/22		
Applicant  MILLS, RANDELL L.		

1. This opinion contains indications relating to the following items:

<input checked="" type="checkbox"/>	Box No. I	Basis of the opinion
<input type="checkbox"/>	Box No. II	Priority
<input type="checkbox"/>	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
<input type="checkbox"/>	Box No. IV	Lack of unity of invention
<input checked="" type="checkbox"/>	Box No. V	Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability, citations and explanations supporting such statement
<input type="checkbox"/>	Box No. VI	Certain documents cited
<input type="checkbox"/>	Box No. VII	Certain defects in the international application
<input type="checkbox"/>	Box No. VIII	Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later. For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/ US  Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (703) 305-3230	Authorized officer  Carol S. W. Tsai Telephone No. (571) 272-2224
DEBORAH A. THOMAS PARALEGAL SPECIALIST GROUP 1900 <i>DWT</i>	

Form PCT/ISA/237 (cover sheet) (January 2004)

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/US05/00073

Box No. I Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

This opinion has been established on the basis of a translation from the original language into the following language \_\_\_\_\_, which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).

2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:

a. type of material

a sequence listing  
 table(s) related to the sequence listing

b. format of material

in written format  
 in computer readable form

c. time of filing/furnishing

contained in international application as filed.  
 filed together with the international application in computer readable form.  
 furnished subsequently to this Authority for the purposes of search.

3.  In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

4. Additional comments:

WRITTEN OPINION OF THE  
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Box No. V Reasoned statement under Rule 43 bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims 16-70	YES
	Claims 1-15	NO
Inventive step (IS)	Claims 16-70	YES
	Claims 1-15	NO
Industrial applicability (IA)	Claims 1-70	YES
	Claims NONE	NO

2. Citations and explanations:

Claims 1-15 lack novelty under PCT Article 33(2) as being anticipated by JP2002008892 to Shimazu.

As to claims 1-15, Shimazu discloses a system of computing and rendering the nature of bound atomic and atomic ionic electrons form physical solutions of the charge, mass, and current density functions of atoms and atomic icons, which solutions are derived from Maxwell's equations using a constraint that the bound electron(s) does not radiate under acceleration, comprising: processing means for processing and solving the equations for charge, mass, and current density functions of electron(s) in a selected atom or ion, wherein the equations are derived from Maxwell's equations using a constraint that the bound electron(s) does not radiate under acceleration; and a display in communication with the processing means for displaying the current and charge density representation of the electron(s) of the selected atom or ion (see Solution, lines 1-6 and Figs. 6-8).

Claims 16-70 meet the criteria set out in PCT Article 33(2), because the prior art does not teach or fairly suggest the algorithm for the rendering of the electron of atomic hydrogen using mathematic equations.

Claims 1-70 meet the criteria set out in PCT Article 33(4) because the subject matter claimed can be made or used in industry.